

ABSTRACT

A collapsible structure with a self-locking mechanism includes a first hub, at least two struts pivotably connected at first ends thereof to the first hub and movable relative to each another between a folded position and an expanded position, and a tension member adapted to limit pivotable movement of the at least two struts such that, when in the expanded position, the at least two struts define an angle of less than 180°. The structure further includes a locking hub and at least two locking struts pivotably connected at first ends thereof to the locking hub and, at second ends thereof, to connection points on respective ones of the at least two struts. A method of erecting a structure is also disclosed.